

DWL-8500AP



KEY FEATURES

- **Dualband Connectivity for Increased Network Capacity**
- **Concurrent Operation in Both 802.11a & 802.11 b/g at Full Bandwidth Speeds**
- **Solid Die Cast Metal Housing Design for Indoor Deployment.**
- **Up to 108Mbps (Turbo Mode) in Both Frequency Bands ¹**
- **Dual Detachable Dipole Antennas Ensure Maximum Coverage**
- **Self-Tuning Features to Adjust & Optimize RF Settings**
- **Load Balancing Among Neighbor AP**

Wireless Unified 108G Access Point

The DWL-8500AP Wireless Unified 108AG Access Point is a high-performance wireless access device that provides up to 108Mbps transmission rates¹ and dualband wireless connectivity. Versatile and powerful, this device can be flexibly deployed as a stand-alone "fat" wireless access point or as a "thin" managed access point (AP) manageable from a wireless switch. Businesses can start with an intelligent DWL-8500AP that provides many advanced wireless LAN functions, then migrate to a centrally managed system anytime later by integrating the same DWL-8500AP to a D-Link unified wired/wireless switch.

Intelligent "Fit" Access Point:

The DWL-8500AP has everything on-board that enables network administrators to set up a secure wireless network and to connect to any Ethernet-compliant switch and router. Advanced wireless functions that the DWL-8500AP supports include: WEP data encryption, WPA/WPA2 security, client MAC address filtering, AP load balancing, QoS/WMM (Wireless Multimedia), and Rouge AP Detection. Security configuration settings can be locally stored in the DWL-8500AP itself. Wireless connections can easily be expanded by adding more DWL-8500AP or other 802.11a/g compliant APs to the site. Businesses without complicated network requirements can use the DWL-8500AP to get a wireless network set up and run without the need for any additional special hardware.

"Thin" AP Centrally Managed From Unified Wired/Wireless Switch:

Alternatively, the DWL-8500AP can operate in conjunction with a D-Link DWS-3024 or DWS-3026 unified wired/ wireless switch. In this mode, multiple DWL-8500AP access points can connect directly or indirectly to one of these switches to provide unparallel security and wireless mobility for wireless clients. Each DWL-8500AP access point will be continually tuned by these switches to provide optimal RF channels and transmission power for all mobile clients, giving them the best wireless signals in both the 802.11a and 802.11g bands and uninterrupted wireless connectivity.

Flexible Dualband Wireless LAN Connectivity:

The DWL-8500AP delivers concurrent wireless performance with maximum wireless signal rates in both frequency bands simultaneously. With dualband connectivity, two wireless networks are created both running at full bandwidth speeds, offering a significant increase in total network capacity. At the same time, the DWL-8500AP remains fully backward compatible with the 802.11b standard in the 2.4GHz frequency.

Adaptable Wireless:

The architecture of most current wireless LAN controllers require wireless traffic to return to the controller for centralized processing, providing unnecessary traffic delay. The DWL-8500AP – when operating with either a DWS-3024 or DWS-3026 switch – offers administrators extra options. Depending on the wireless application, wireless traffic can either be tunneled back to the switch for better security control, or locally forwarded at the access point for optimal performance. This device offers administrators maximized flexibility with options to tunnel guest traffic to the switch for centralized security control, and forward VoIP traffic directly from the access point for optimal performance.

Up to 108Mbps Speed:

With transmission speeds of up to 108Mbps (Turbo mode) on both frequency bands¹, the DWL-8500AP is an ideal solution for bandwidth intensive WLAN application. In a typical working environment with multiple users accessing the network at the same time, the DWL-8500AP can operate at double times the throughput of regular 802.11g wireless LAN equipment.

Sensitive Information Not Stored Locally:

When operating in conjunction with a DWS-3024 or DWS-3026 switch, individual DWL-8500AP access points do not store any user data locally. The DWS-3024/3026 switch is the hardware that keeps network and user information. The DWL-8500AP thus can be installed in an unsecured area, and users do not have to worry about hackers stealing data directly from the access points.

Self Configuration and Easy Installation:

When operating in conjunction with a DWS-3024 or DWS-3026 switch, the switch automatically configures every connected "thin" DWL-8500AP access point, so no configuration is necessary during installation. If a DWL-8500AP needs to be replaced, the replacement DWL-8500AP automatically inherits the same configuration, making the replacement process as simple as a child's game.

PoE Facilitates Wireless Deployment:

For maximum coverage, the DWL-8500AP can be placed at out-of-the-way locations such as on a ceiling or a high wall, where AC outlets are inaccessible and providing power to these locations is difficult and expensive. The DWL-8500AP can easily obtain power from a DWS 3024/3026 switch located as far as 100 meters away through the existing network cable, doing away with the need to install separate power wiring. With industry standard 802.3af PoE support, this wireless access point does not even require a PoE injector.

Continuous Channel Scanning To Detect Rogue AP:

DWL-8500AP continuously scans both frequency bands and their associated channels to detect rogues while simultaneously providing wireless connectivity to mobile clients. If a rogue is detected, it reports the result to the DWS-3024/3026 wireless switch that manages it. From a management console, administrators can identify the rogue AP and take appropriate action.

Total Security & Quality of Service:

The DWL-8500AP supports 64/128/152-bit WEP data encryption, WPA/WPA2 security and multiple SSID per RF frequency band. Connected to the DWS-3024/3026 switch, these functions along with wireless user MAC Address Filtering and SSID Broadcast Disable can be used to set up security and limit outsiders' access to the internal network. The DWL-8500AP supports 802.1Q VLAN Tagging and WMM (Wi-Fi Multimedia) for important wireless transmissions such as VoIP and streaming media applications, delivering critical user based services, such as prioritized delivery of voice traffic.

Standards:

- IEEE 802.11a, 802.11b, 802.11g Wireless LAN
- IEEE 802.11d Regulatory Domain Selection
- IEEE 802.3x Flow Control
- IEEE 802.3, 802.3u Ethernet
- IEEE 802.11h
- IEEE 802.3af Power over Ethernet (PoE)

Data Transfer Rates ¹:

- For 802.11a/g:
108, 54, 48, 36, 24, 18, 12, 9 and 6Mbps
- For 802.11b:
11, 5.5, 2 and 1Mbps

Wireless Frequency Range:

- 802.11a: 5.15GHz to 5.35GHz and 5.725GHz to 5.825GHz
- 802.11b/g: 2.4GHz to 2.4835GHz

RF Channels:

- 802.11a:
12 Non-Overlapping Channels for US and Canada
19 Non-Overlapping Channels for EU
8 Non-Overlapping Channels for Japan
5 Non-Overlapping Channels for China
- 802.11b:
11 Channels for United States
13 Channels for Japan
13 Channels for EU
- 802.11g:
11 Channels for United States
13 Channels for Japan
13 Channels for Europe Countries

Radio and Modulation Type:

- For 802.11b (DSSS):
DBPSK @ 1Mbps
DQPSK @ 2Mbps
CCK @ 5.5 and 11Mbps
- For 802.11a/g (OFDM):
BPSK @ 6 and 9Mbps
64QAM @ 48, 54 and 108Mbps
QPSK @ 12 and 18Mbps
16QAM @ 24 and 36Mbps
- For 802.11a/g (DSSS):
DBPSK @ 1Mbps
DQPSK @ 2Mbps
CCK @ 5.5 and 11Mbps

Transmit Output Power ²:

- For 802.11a:
16dBm at 6, 9, 12 and 18Mbps
12dBm at 54 and 48Mbps.
14dBm at 24 and 36Mbps

- For 802.11b:
18dBm at 11, 5.5, 2 and 1Mbps
- For 802.11g:
18dBm at 6, 9, 12 and 18Mbps
14dBm at 48 and 54Mbps
16dBm at 24 and 36Mbps

EIRP:

- Typical EIRP Using default Antennas:
802.11a 16dBm 802.11g 18dBm

Receiver Sensitivity:

- For 802.11a:
-87dBm at 6Mbps
-83dBm at 18Mbps
-71dBm at 48Mbps
-86dBm at 9Mbps
-80dBm at 24Mbps
-71dBm at 54Mbps
-85dBm at 12Mbps
-76dBm at 36Mbps
-68dBm at 108Mbps
- For 802.11b:
-83dBm at 11Mbps
-92dBm at 1Mbps
-88dBm at 5.5Mbps
-89dBm at 2Mbps
- For 802.11g:
-87dBm at 6Mbps
-83dBm at 18Mbps
-71dBm at 48Mbps
-86dBm at 9Mbps
-80dBm at 24Mbps
-71dBm at 54Mbps
-85dBm at 12Mbps
-76dBm at 36Mbps
-68dBm at 108Mbps

Antennas:

- 2 Dualband Detachable Dipole Antennas With Reverse SMA Connectors
- Antenna Gain: 5.5 dBi for 5GHz frequency band, 2.5dBi for 2.4GHz frequency band

Ethernet Interface:

- 10/100BASE-TX Port With 802.3af PoE
- Configurable Operation Mode:
-Access Point Only

Security:

- 64/128/152-bit WEP Data Encryption
- MAC Address Filtering
- WPA/WPA2 EAP
- WPA/WPA2 PSK
- AES

- 802.11i-ready
- 802.1Q SSID Broadcast Enable/Disable
- 8 SSID per Frequency Band
- Isolated Security for Each SSID (Different Security Setting for Each SSID)
- Station Isolation
- IEEE 802.1X Supplicant

Supported Management Methods / Protocols:

- Uses Protocols Supported in DWS-3024/3026 Unified Switches
- HTTP/HTTPS
- Telnet
- SSH
- Syslog

Diagnostic LEDs:

- Power
- 802.11b/g
- Status
- 802.11a
- LAN

Operating Voltage:

- 48VDC +/- 10% for PoE

Power Supply:

- Through 48VDC, 0.4A External Power Adapter

Power Consumption:

- Max.8.5W without POE Max.9W with POE

Dimensions:

- 277.7 mm (L) x 155 mm (W) x 45 mm (H)

Weight:

- 800 grams (1.76 lbs)

Operating Temperature:

- 0°C to 40°C (32°F to 104°F)

Storage Temperature:

- -20°C to 65°C (-4°F to 149°F)

Operating Humidity:

- 10% to 90% (Non-Condensing)

Storage Humidity:

- 5% to 95% (Non-Condensing)

Certification:

- FCC Class B
- TELEC
- En60601-1-2
- CE
- UL
- C-Tick
- Wi-Fi
- VCCI
- ICES-003

	Stand-Alone	ModeManaged Mode (Managed by DWS-3024 or DWS-3026 switch)
Centralized Management	No	Yes
Centralized Firmware Dispatch	No	Yes
Visualized AP Management Tool	No	Yes
Auto-Power Adjustment	No	Yes
Dynamic Auto-Channel Selection	No	Yes
L2 Fast Roaming	No	Yes
L3 Fast Roaming	No	Yes
Captive Portal	No	Yes
WEP/WPA/WPA2 Security	Yes	Yes
Rogue AP Detection	Yes	Yes
Station Isolation	Yes	Yes
MAC Address Filtering	Yes	Yes
AP Load Balancing Setup	Yes	Yes
Local Storage of Configuration	Yes	No
QoS/WMM	Yes	Yes



Ordering Information:

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Access Point

F2-156-0-1.2-0703

¹ Maximum wireless signal rate 54Mbps based on IEEE standard 802.11a and 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead can lower actual data throughput rate. 108Mbps Turbo mode operation in 5GHz frequency band is not allowed in EU countries.

² Maximum power setting will vary according to individual country regulations.
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